

the probable production of water from the various strata.

In the discussion which ensued, the dean of Westminster treated with his usual clearness of scientific research the difficult problem of the origin of subterranean lakes or sheets of water, and the causes of the spontaneous ascent of the water towards the surface of the earth. He described the influence of the alternating impermeable beds of clay in retaining within the more porous strata the water received at their outcrop, whence became evident the cause of the rising of water in the Artesian wells, sunk through the impermeable London clay down to the porous chalk basin into which the water had filtered through the fissures and veins of flints, from the extensive denuded surface of chalk around the London district.

After treating this subject at considerable length, the rev. doctor alluded incidentally to the proposed speculation for supplying the metropolis with water from the river Colne, and described the labours of the Rev. Mr. Clutterbuck, who, in papers read before the Institution of Civil Engineers, had demonstrated, by a long continued series of measurements of the water in the chalk hills of Hertfordshire, that all the water taken from that neighbourhood would have been abstracted from the supplies of the river Colne, and would have trenchered upon the water rights of the mill owners; he alluded also to the rain-gauge experiments of Mr. John Dickinson, who during many years had found by arithmetical evidence, that the quantity of summer water in the Colne varied with the quantity of rain in the preceding winter, and he regulated his contracts for paper to be manufactured in the summer and autumn, by the quantity of water shown in his winter rain-gauge; these observations have been corroborated by foreign experiments. He then treated briefly the general subject of Artesian wells, the increased temperature of the water in the exact ratio of the depth, the sympathy between the depression of water in the various wells throughout an extensive chalk district, proving the identity of origin of the supplies. As the number of deep wells was therefore constantly increasing, the extra pumping upon one of them necessarily affected all within a certain distance around it. Mr. Clutterbuck's observations confirmed this. He had further observed, that the surface line of subterranean sheets of water was not horizontal, but inclined at a considerable rate, in consequence of the friction of the strata through which the water descended. The doctor concluded by drawing attention to the remarkable contour of the surface of the chalk exhibited in the sections, upon which he proposed on a future occasion to offer some observations.

The substance of a description of the large cast-iron lock gates recently constructed by Messrs. Rennie for the new docks at Sevastopol, in Turkey, and of a new mode of analysing iron by M. Marguerite, were briefly mentioned. The president congratulated the members on the success of the past session, and after the ballot, at which Messrs. C. E. Cawley, E. L. Williams, and G. Giles, were elected as members, and F. Warren and G. Selby as associates, the meeting was adjourned until the second Tuesday in January, 1847.

#### AS TO GIVING NOTICE TO DISTRICT SURVEYORS.

MR. MOXHAY, of the Hall of Commerce, in Threadneedle street, appeared at Guildhall on Saturday last, upon the complaint of Mr. Montague, the surveyor of the north district of the city, for unlawfully taking down and rebuilding a piece of wall in Inner Cushion-court, Old Broad-street, without giving previous notice to the complainant, whereby he had incurred a forfeiture of thrice the amount of the surveyor's fees, and a fine not exceeding 20*l*. We take the following particulars from *The Times*.

Mr. Montague said he made this complaint, not to recover his fees, which in this case he renounced, but to shew that the New Building Act must be attended to, and that the consequence of disregarding it might be the incurring of serious penalties. He should press for the infliction of a fine, by way of warning to others. This wall was declared to be dangerous, was shored up, and Mr. Moxhay was

required to repair it. It had been repaired, and no notice had been given to him. Now the law required him to sign a certificate that the repairs had been made properly, according to the Act, but how was he to do this when he knew nothing about it till the work was covered in and finished? By the 13th section, notice was to be delivered at his office two days before any wall should be altered. In this case, his fee for attending to survey, &c., was 3*l*. 3*s*.

Mr. Moxhay asked him how he could pretend to be ignorant of the matter, when he had himself caused an official notice from the Court of Aldermen to be served on him, requiring him to repair the wall within fourteen days.

Mr. Montague said he had nothing to do with the notice produced. It emanated not from him, but the office of the city solicitor.

Mr. Moxhay proceeded to interrogate Mr. Montague with some heat on this point.

Mr. Montague explained, that he received a letter from Mr. Brown of Cushion-court, calling his attention to the dangerous state of this wall, which was rotten, loose, and bulging. He went and looked at it, and reported to the official referees that he considered it to be highly dangerous. The referees gave notice to the Court of Aldermen, who directed the city surveyor to immediately, by boarding in and shoring up, secure the wall; and the city solicitor was instructed to give notice to the owner to begin to repair the same within 14 days. He knew, therefore, that the wall required to be repaired, and that somebody would have notice to repair, but he did not know when the party would begin the repair, that he might attend and see what was being done. The party who repaired the wall was required to give him two days' notice before he began, in order that he might be present at the proper time.

Mr. Moxhay said he did not consider that the wall belonged to him, but it had been decided that it did. It had, to the extent of three yards, been loosened, by driving wedges against it, in the course of some repairs going forward at the premises of Mr. Brown, who made the original complaint of the unsoundness of the wall. He maintained that, in fact, there could be no want of knowledge that the wall was to be immediately repaired, as Mr. Montague himself helped to put the law in motion; and, secondly, that as the city authorities ordered him to make the repair, it dispensed with the necessity on his part of giving notice of his intention to repair. The one notice must override the other.

The magistrates called in the city solicitor to advise on the question, who was of opinion the builder or owner was not relieved from the obligation to give notice to the district surveyor of the precise day of commencing the repair, and that the penalty had been incurred; but Mr. Moxhay had not omitted to give the notice in the defiance of the law or to evade any lawful fees, and this should be considered in fixing the amount of the fine. They all knew how much Mr. Moxhay had done to adorn the city.

Mr. Alderman Moon and Sir C. Marshall concurred in the compliment paid to Mr. Moxhay, and mitigated the fine to 40*s*. At the same time they complimented the surveyor on his disinterestedness in renouncing the treble fee of nine guineas.

Mr. Montague surrendered the penalty of 40*s*. to the poor-box.

**COMPLETION OF THE SCOTT MONUMENT AT EDINBURGH.**—The statue of Sir Walter Scott will shortly be in its place, and on the 15th of August the anniversary of the birth-day of Sir Walter, the statue will be unveiled and the monument completed with great ceremony, in the presence of the members of a procession of the Grand Lodge of Scottish Free Masons, and a holiday crowd of the citizens, who are expected to carry through the inauguration with great éclat.

**QUARRY.**—A very fine quarry of red granite has been discovered on the estate of Mr. John Lawrence, of Castlop, near this town, which is likely to prove very advantageous for building purposes, the quality of the stone being remarkably good and firm.—*Strepitosa Conservativa*.

#### RESTORATION OF COLOGNE CATHEDRAL.

THE following is the eleventh quarterly report of the architect, Mr. Zwirner, from the beginning of January to the end of March, 1846. Translated from the *Kolner Domblatt*, No. 16, in the *Eccelesiologist*:—

"As is always the case during the winter, the works for the above period have been chiefly confined to preparing the stones to be employed in those parts of the building which will be erected during the ensuing summer. Thus on his Majesty's account, the materials provided for the south transept, and those also especially which are intended for carrying up the nave to a greater height, and for the columns and gallery of the triforium, have been now got ready, while on account of the 'Central Restoration Society' and the 'Bavarian Society,' similar preparations have been made towards the works on the north transept and nave aisle. In this latter part the building itself was resumed early in March, and the two half-blind windows with the pillars (or buttresses?) belonging to them, occupying the north-west angle formed by the nave and transept, have been raised to the height of about ten feet.

With a view to the erection of the north tower, it was essential that the foundations of the southern central pier (*mittelpfeiler*) should be properly laid and adjusted. Accordingly I had the pavement taken up, and the rubbish, which had been filled in, cleared away, in the full persuasion that the foundations to so principal a member of the edifice must have been laid by the old builders at the same time with the other foundations of the tower, according to what the first principles of the art would require. Upon making the excavations, however, there was first discovered a vault which had been filled in and walled up with brick-work, upon the floor of which great quantities of human bones were lying about without coffins. Beneath this floor, lying some ten feet below the surface, I expected to find the old foundations of the tower; we had however to dig yet deeper, and at a depth of thirteen feet first came upon a mass of masonry composed of large blocks of basalt. But this, upon closer examination, turned out to be no more than an old irregular and limited fragment of wall, having no relation to the general plan of the tower foundations, and, besides this, reposing on nothing but some building materials loosely filled in, without there being any appearance of masonry to be found further.

Here, then, we have the foundations of one principal support of the tower entirely wanting, and it will therefore have to be laid new from the very bottom. The requisite excavations for this purpose have been made to the depth of about thirty feet. Upon this occasion it appeared that the foundation to the western supports of this north tower, instead of being connected with the other foundations of the tower, is, in like manner, isolated, being laid in detached boarded shafts, of which the impressions left by the boards upon the external mortar are yet visible. The same way of building was also observed in the completion of the transept foundations, upon which I made what remarks were necessary in the supplement appended to my first report, entitled, 'The building of Cologne cathedral, past and present,' (see the *Domblatt*, No. 5, first year, 1842).

The worst of this occurrence is the great delay and unforeseen expense which must necessarily be occasioned by the construction of an entirely new foundation. Whether the foundation for the central pier (*mittelpfeiler*) of the tower exists or not, it is as yet quite impossible to decide, as the ground is at present occupied with the materials for laying the foundation of that already mentioned."

In conclusion, after some accounts which are omitted here, the architect regretted that the keeping of several separate accounts and the division of the expenses among different portions of the building, tended much to complicate the management; and that the simultaneous employment of the workmen on five different parts of the works added much to the trouble and expense of the undertaking."

\* The very extensive use of the word *pfeiler* (pillar, column, support, buttress), in Germany, creates some difficulty in these reports. It is difficult to make the term signify fully intelligibly without the assistance of a plan, or an accurate knowledge of the building itself.—TRANSLATOR.